

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-74 (cancelled)

75. (previously presented) A system, comprising:

an integral automotive linkage configured to mount within an automobile to link two or more elements integrally together in an assembly, comprising:

a hollow elongated member having a constant cross-section along the entire length of the hollow elongated member, wherein the constant cross-section comprises a multi-sided interior defining first and second sockets at respective first and second opposite ends of the hollow elongated member;

a first joint member coupled to the first socket, wherein the first joint member comprises an attachment portion having a multi-sided perimeter mated with the multi-sided interior of the first socket; and

a second joint member coupled to the second socket, wherein the second joint member comprises another attachment portion having another multi-sided perimeter mated with the multi-sided interior of the second socket,

wherein the first joint member comprises a ball joint and the second joint member comprises a female joint.

76. (cancelled)

77. (cancelled)

78. (previously presented) The system of claim 75, wherein the first and second joint members comprise the same attachment portion.

79. (previously presented) The system of claim 75, wherein the first and second joint members are selected from a plurality of different joint members having the same attachment portion.

80. (cancelled)

81. (previously presented) The system of claim 75, wherein the multi-sided interior is a square.

82. (previously presented) The system of claim 75, wherein the constant cross-section is a uniformly extruded geometry along the entire length of the hollow elongated member.

83. (withdrawn-previously presented) A system, comprising:

an elongated automotive linkage comprising a first end, a second end, and a uniform cross-section from the first end to the second end configured to mount integrally within an automobile; and

a family of joints each comprising a modular attachment portion configured to mate with the uniform cross-section at the first or second end of the elongated automotive linkage, wherein the family of joints comprise a rotatable joint and a non-rotatable joint.

84. (withdrawn-previously presented) The system of claim 83, wherein the family of joints comprise a ball joint, or a polygonal receptacle joint, or a circular receptacle joint, or a square receptacle joint, or a hook-shaped joint, or a bushing and grommet joint, or a combination thereof.

85. (withdrawn-previously presented) The system of claim 83, wherein the family of joints comprise a plurality of different rotatable joints including the rotatable joint.

86. (withdrawn-previously presented) The system of claim 83, wherein the uniform cross-section comprises a uniform hollow interior.

87. (withdrawn-previously presented) The system of claim 83, wherein the elongated automotive linkage and the family of joints comprise a family of different automotive suspension or steering linkages.

88. (withdrawn-previously presented) A family of linkages, comprising:
a plurality of elongated hollow linkages each comprising a uniformly extruded cross-section extending between opposite ends of the respective elongated hollow linkage; and

a plurality of joints having different geometries and joint mechanisms, wherein each of the plurality of joints has a standard attachment portion configured to mate with the uniformly extruded cross-section at one of the opposite ends of one of the plurality of elongated hollow linkages, wherein the plurality of joints comprise a metallic joint structure, a non-metallic joint structure, a rotatable joint structure, a non-rotatable joint structure, and one or more combinations thereof.

89. (withdrawn) The family of claim 88, wherein the plurality of elongated linkages comprise a first linkage having a square cross-section and a second linkage having a cross-section defined by a plurality of superimposed squares.

90. (withdrawn) The family of claim 88, wherein the uniformly extruded cross-section comprises a uniform wall thickness.

91. (withdrawn) The family of claim 88, wherein the standard attachment portion comprises a square geometry.

92. (withdrawn) The family of claim 88, wherein the plurality of joints comprise a plurality of different rotatable joint structures.

93. (withdrawn) The family of claim 88, wherein the plurality of joints comprise a plurality of different male and female joint structures.

94. (withdrawn) The family of claim 88, wherein plurality of elongated hollow linkages and the plurality of joints define a family of automotive linkages.

95. (withdrawn-previously presented) A system, comprising:
a family of linkage joints having different geometries and joint mechanisms, wherein each of the family of linkage joints has a standard attachment portion configured to mate with a uniform lengthwise cross-section of an elongated hollow linkage, and configured to mount integrally with a component of a system of interconnected machine elements,

wherein the family of linkage joints comprises a ball joint, a polygonal receptacle joint, a generally circular joint, and a bushing and grommet joint.

96. (withdrawn-previously presented) The system of claim 95, wherein the standard attachment portion comprises a square geometry.

97. (withdrawn-previously presented) The system of claim 95, wherein the family of linkage joints comprises a plurality of different rotatable joint structures.

98. (withdrawn-previously presented) The system of claim 95, wherein the family of linkage joints comprises a plurality of different male and female joint structures.

99. (previously presented) A system, comprising:
a linkage having a uniform socket geometry along the entire length of the linkage;

a first joint coupled to the uniform socket geometry at a first end of the linkage;
and

a second joint coupled to the uniform socket geometry at a second end of the linkage opposite the first end, wherein the first and second joints are configured to mate integrally with first and second mating joints, respectively,

wherein the first joint comprises a plastic ball joint and the second joint comprises a metallic non-rotatable joint.

100. (cancelled)

101. (withdrawn) The family of claim 88, wherein each of the plurality of elongated hollow linkages is configured to link two or more elements integrally together in an assembly.

102. (withdrawn-previously presented) The system of claim 75, wherein the female joint is a polygonal receptacle joint.

103. (withdrawn-previously presented) The system of claim 75, wherein the female joint is a circular receptacle joint.

104. (withdrawn-previously presented) The system of claim 75, wherein the female joint is a bushing and grommet joint.

105. (withdrawn-previously presented) The system of claim 75, wherein the ball joint is at least substantially made of plastic.

106. (withdrawn-previously presented) The system of claim 83, wherein the family of joints comprises a ball joint, a polygonal receptacle joint, a circular receptacle joint, and a bushing and grommet joint.

107. (withdrawn-previously presented) The system of claim 83, wherein the family of joints comprises a female joint and a male joint.

108. (withdrawn-previously presented) The system of claim 107, wherein the male joint is the rotatable joint and the female joint is the non-rotatable joint.

109. (withdrawn-previously presented) The system of claim 95, wherein the family of linkage joints comprises at least one plastic joint and at least one metallic joint.

110. (withdrawn-previously presented) The system of claim 99, wherein the metallic non-rotatable joint is a polygonal receptacle joint.

111. (withdrawn-previously presented) The system of claim 110, wherein the polygonal receptacle joint is a square receptacle joint.

112. (withdrawn-previously presented) The system of claim 99, wherein the metallic non-rotatable joint is a circular receptacle joint.

113. (withdrawn-previously presented) The system of claim 99, wherein the metallic non-rotatable joint is a hook-shaped joint.